Three Hours and Twenty Minutes

SESSION VIII

CONCEPTS AND PRINCIPLES OF THE STANDARDIZED FIELD SOBRIETY TESTS (SFST)

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CONCEPTS AND PRINCIPLES OF THE STANDARDIZED FIELD SOBRIETY TESTS (SFST)

Upon successfully completing this session, the student will be able to:

- Discuss the development and validity of the research and the standardized elements, clues and interpretation of the three standardized field sobriety tests.
- Discuss the different types of nystagmus and their effects on the Horizontal Gaze Nystagmus test.
- Discuss and properly administer the three standardized field sobriety tests.
- Discuss and recognize the clues of the three standardized field sobriety tests.
- Describe in a clear and convincing manner and properly record the results of the three standardized field sobriety tests on a standard note taking guide.
- Discuss the limiting factors of the three standardized field sobriety tests.

CONTENTS SEGMENTS	LEARNING ACTIVITIES
A. Overview: Development and Validation	o Instructor-Led Presentation
B. SFST Field Validation Studies	o Instructor-Led Demonstration
C. Horizontal Gaze Nystagmus	o Student Practice Session and Demonstration
D. Vertical Gaze Nystagmus	
E. Walk-and-Turn	
F. Combining the Clues of the Horizontal Gaze Nystagmus and Walk-and-Turn	
G. One-Leg Stand	
H. Limitations of the Three Tests	
I. Taking Field Notes on the Standardized Field Sobriety Tests	

Display Slide VIII-O (Session Objectives)

Aides	Lesson Plan	Instructor Notes
3 Hours 20 Minutes	**VIII CONCEPTS AND PRINCIPLES OF THE STANDARDIZED FIELD SOBRIETY TESTS (SFST)**	
15 Minutes	**A. Overview: Development and Validation**	
Display Overhead VIII-1	1. For many years law enforcement officers have utilized field sobriety tests to determine the impairment of a person's driving due to alcohol influence. The performance of the person on those field sobriety tests was used by the officer to develop probable cause for arrest and as evidence in court. A wide variety of field sobriety tests existed and there was a need to develop a battery of standardized valid tests.	Point out to students that NHTSA contracted with the Southern California Research Institute (SCRI) in 1975 to develop these field tests. SCRI published the following three reports: California: 1977 (Lab) California: 1981 (Lab and Field) Maryland, D.C., V.A., N.C., 1983 (Field)
Display Overhead VIII-1A	2. Beginning in late 1975, extensive scientific research studies were sponsored by NHTSA through a contract with the Southern California Research Institute (SCRI) to determine - which roadside field sobriety tests were the most accurate.	

Aides	Lesson Plan	Instructor Notes
 **Display** Overhead VIII-2	3. SCRI traveled to law enforcement agencies through the United States to select the most commonly used field sobriety tests. Six tests were used in the initial stages of this study. 4. Laboratory research indicated that three of these tests, when administered in a standardized manner, were a highly reliable battery of tests for distinguishing BACs above 0.10: o Horizontal Gaze Nystagmus (HGN) o Walk-and-Turn (WAT) o One-Leg Stand (OLS)	
 **Display** Overhead VIII-3	5. NHTSA analyzed the laboratory test data and found: o HGN, by itself, was 77% accurate. o WAT, by itself, was 68% accurate. o OLS, by itself, was 65% accurate. o By combining the results of HGN and WAT, an 80% accuracy rate can be achieved.	
 **Display** Overhead VIII-4	6. The final phase of this study was conducted as a field validation.	

Aides	Lesson Plan	Instructor Notes
 **Display** Overhead VIII-4A	o Standardized, practical and effective procedures were developed.	
 **Display** Overhead VIII-4B	o The tests were determined to discriminate in the field, as well as in the laboratory. 7. The three standardized tests were found to be highly reliable in identifying subjects whose BACs were above 0.10. The results of the study validated the SFSTs.	
 **15 Minutes**	**B. SFST Field Validation Studies**	
 **Display** Overhead VIII-5	1. Three SFST validation studies were undertaken between 1995 and 1998: o Colorado - 1995 o Florida - 1997 o San Diego - 1998	See Attachments D, E, and F.
 **Display** Overhead VIII-6	2. The Colorado SFST validation study was the first full field study that utilized law enforcement personnel experienced in the use of SFSTs. o The original SCRI study utilized only a few experienced officers in DWI enforcement in both a laboratory setting and field setting.	

- Based on the 3-test battery (HGN, WAT, OLS), correct arrest decisions were made 93% of the time. Substantially higher than the initial study results.

3. The Florida SFST field validation study was undertaken in order to answer the question of whether SFSTs are valid and reliable indices of the presence of alcohol at 0.08 levels and above when used under present day traffic and law enforcement conditions.

Display
Overhead
VIII-7

- Based on the 3-test battery (HGN, WAT, OLS), correct decisions to arrest were made 95% of the time.

- This study has shown that the SFST 3-test battery is the only scientifically validated and reliable method for discriminating between impaired and unimpaired drivers.

4. The San Diego SFST field validation study was undertaken because of the nationwide trend towards lowering the BAC limits to 0.08. The question to be answered was “does SFST discriminate at BAC’s below 0.10".

Aides	Lesson Plan	Instructor Notes
 **Display** Overhead VIII-8	o Based on the 3-test battery (HGN, WAT, OLS), arrest decisions were supported 91% of the time at the 0.08 BAC level and above. o HGN is still the most reliable of the 3-test battery. This study provided the first indications supporting arrest decisions at 0.08 BAC. The study also suggests that HGN can provide valid indications of 0.04 BAC and above.	Note: Refer to Session VIII, Attachment B for information regarding all SFST research studies.
 **1 Hour 15 Minutes**	**C. Horizontal Gaze Nystagmus** 1. Review of definition. a. Involuntary jerking of the eyes, occurring as the eyes move toward the side.	
 **Display** Overhead VIII-9	b. In addition to being involuntary: o person is usually unaware that it is happening. o person is powerless to stop it or control it. 2. Key Summary Point. a. Alcohol and certain other drugs cause Horizontal Gaze Nystagmus.	

Aides	Lesson Plan	Instructor Notes
 **Display** Overhead VIII-10	3. Categories of Nystagmus. a. Horizontal Gaze Nystagmus is not the only kind of nystagmus. b. There are other circumstances under which the eyes will jerk involuntary. c. It is important to know some of the other common types of nystagmus, to be aware of their potential impact on our field sobriety tests. d. Nystagmus of several different origins may be seen. There are three general categories of nystagmus: (1) <u>Vestibular</u> Nystagmus is caused by movement or action to the vestibular system. (a) Types of vestibular nystagmus: <u>Rotational</u> Nystagmus occurs when the person is spun around or rotated rapidly, causing the fluid in the inner ear to be disturbed.	Reveal the first category on Slide VIII-10. Point out that the vestibular system is a sense organ located in the inner ear. It provides information to the brain, and consequently to the eyes about position and movement of the head to maintain orientation and balance of the body. If you were able to observe the eyes of a rotating person, they would be seen to jerk noticeably.

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	Post Rotational When the person stops spinning, the fluid in the inner ear remains disturbed for a short period of time, and the eyes continue to jerk.	Also indicate that these types of nystagmus will not interfere with the horizontal gaze nystagmus test due to the conditions under which they occur. To illustrate rotational and post rotational, swirl a half glass of water several times. Stop swirling glass, water will continue to spin for a short period of time.
	Caloric Nystagmus occurs when fluid motion in the canals of the vestibular system is stimulated by temperature as by putting warm water in one ear and cold in the other.	
	Positional Alcohol Nystagmus (PAN) occurs when a foreign fluid, such as alcohol, that alters the specific gravity of the blood is in unequal concentrations in the blood and the vestibular system.	**NOTE: The original research does not support the administration of HGN to someone who is lying down.** This causes the vestibular system to respond to gravity in certain positions, resulting in nystagmus. There are two types of PAN: PAN I-occurs when the alcohol concentration in the blood is greater than the inner ear fluid. PAN I occurs while BAC is increasing.

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		PAN II - occurs when the alcohol concentration in the inner ear fluid is greater than in the blood. An example of PAN is the spinning of a room when a person lies down after consuming alcohol. This occurs while BAC is decreasing.
	(2) Nystagmus can also result directly from <u>neural</u> activity: <u>Optokinetic</u> Nystagmus occurs when the eyes fixate on an object that suddenly moves out of sight, or when the eyes watch sharply contrasting moving images.	Reveal the next category on Slide VIII-10.
	Examples of optokinetic nystagmus include watching strobe lights, rotating lights, or rapidly moving traffic in close proximity. The Horizontal Gaze Nystagmus test will not be influenced by optokinetic nystagmus if administered properly.	Point out that during the Horizontal Gaze Nystagmus test, the suspect is required to focus the eyes on a penlight, pencil or similar object that moves smoothly and relatively slowly across the field of view, thus optokinetic nystagmus will not occur.
	<u>Physiological</u> Nystagmus is a natural nystagmus that keeps the sensory cells of the eye from tiring. It is the most common type of nystagmus.	Emphasize that physiological nystagmus will have no impact on our standardized field sobriety tests, because its tremors are generally invisible.

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	It happens to all of us, all the time. This type of nystagmus produces extremely minor tremors or jerks of the eyes. These tremors are generally too small to be seen with the naked eye. <u>Gaze</u> Nystagmus occurs as the eyes move from the center position. Gaze nystagmus is separated into three types: <u>Horizontal</u> Gaze Nystagmus occurs as the eyes move to the side. It is the observation of the eyes for <u>Horizontal</u> Gaze Nystagmus that provides the first and most valid test in the standardized field sobriety testing battery. Although this type of nystagmus is most accurate for determining alcohol influence, its presence may also indicate use of certain other drugs.	Emphasize to students that this training course is concerned with Horizontal Gaze Nystagmus and that this procedure has been validated as an accurate indicator for alcohol influence by extensive scientific research. Alcohol is a central nervous system depressant. Examples of other drugs are: Depressants, Inhalants, PCP and its analogs.

Aides	Lesson Plan	Instructor Notes
	Vertical Gaze Nystagmus occurs as the eyes gaze upward. The presence of this type of nystagmus is associated with high doses of alcohol for that individual and certain other drugs. The drugs that produce Vertical Nystagmus are the same ones that produce Horizontal Gaze Nystagmus. There is no drug that will cause VGN that does not cause HGN. If VGN is present and HGN is not, it could be a medical condition.	NOTE: All drugs that induce HGN may also induce VGN, if enough of the drug is taken.
	(3) Nystagmus may also be caused by certain pathological disorders. They include brain tumors and other brain damage or some diseases of the inner ear. These pathological disorders occur in very few people and in even fewer drivers.	Reveal the next category on Slide VIII-10. Point out that nystagmus caused by pathological disorders is extremely rare in the driving population. Persons suffering from these disorders are rarely able to drive.
	4. Medical Impairment. a. The observations that you can make to assess possible medical impairment include:	

Aides	Lesson Plan	Instructor Notes
	o Resting Nystagmus o Tracking ability o Pupil size	
	b. Resting Nystagmus is referred to as jerking as the eyes look straight ahead. This condition is not frequently seen. Its presence usually indicates a pathology or high doses of a drug such as PCP.	NOTE: Resting Nystagmus may also be a medical problem. Although this observation is an important medical assessment, it is NOT an HGN administrative procedure step.
	c. Tracking Ability will be affected by certain medical conditions or injuries involving the brain:	Demonstrate how to check for tracking ability.
	o If the two eyes do not track together, the possibility of a serious medical condition or injury is present.	Point out: Even though the possibility of alcohol and/or drug impairment exists, officers should be aware of medical conditions having symptoms in common with alcohol influence.
	o By passing a stimulus across both eyes, you can check to see if both eyes are tracking equally.	
	o If they don't (i.e., if one eye tracks the stimulus, but the other fails to move, or lags behind the stimulus) there is the possibility of a neurological disorder.	Note: Testing for HGN in a subject with an eye disorder or an artificial eye has not been validated by research.

Aides	Lesson Plan	Instructor Notes
	o If a person has sight in both eyes, but the eyes fail to track together, there is a possibility that the person is suffering from an injury or illness affecting the brain.	Note: For further information on drugs other than alcohol and procedures for conducting a preliminary examination to check for medical impairment, injury or drug impairment, see the curriculum package entitled "Drugs That Impair Driving", or “Introduction to Drugged Driving” available from the NHTSA.
	d. Pupil Size will be affected by some medical conditions or injuries:	
	o If the two pupils are distinctly different in size, it is possible that the subject has a glass eye, or is suffering from a head injury or a neurological disorder.	
 **Display** Overhead VIII-11	5. Administrative Procedures for Horizontal Gaze Nystagmus.	Prior to administering HGN, check to see if the subject has any eye problems or eye abnormalities.
	It is important to administer the Horizontal Gaze Nystagmus test systematically, to ensure that nothing is overlooked.	
	a. Begin by instructing the suspect to remove eyeglasses, if worn.	Point out that eyeglasses may impede the suspect's peripheral vision, and may also impede the officer's ability to observe the eye carefully.
	o It does not matter whether the suspect can see the stimulus with perfect clarity, as long as suspect can see it at all.	Remind students that nystagmus is not a vision test.

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	b. Give the suspect the appropriate verbal instructions: o Put feet together, hands at the side. o Keep head still o Look at the stimulus o Follow movement of the stimulus with the eyes only o Keep looking at the stimulus until told the test is over	Point out that officers should note whether suspect sways, wobbles, etc. while trying to balance. Emphasize that these are the major points that must be conveyed during the verbal instructions.
	c. Position the stimulus approximately 12-15 inches (30-38 cm) in front of suspect's nose, and slightly above eye level to commence the test.	Resting Nystagmus may be observed at this time. Officers should note whether the suspect displays Resting Nystagmus.
	d. Check for equal tracking.	Move the stimulus rapidly from center to far right, to far left and back to center (approximately 2 seconds).
	e. Check for equal pupil size.	Demonstrate by placing coins (penny and dime) next to each other on an overhead projector.
	f. Check the left eye for lack of the "Smooth Pursuit" clue. If the eye is observed to jerk while moving, that is one clue.	Remind students to also check for resting nystagmus when checking for equal pupil size.

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	o Check the right eye for lack of the "Smooth Pursuit" clue and compare.	Remind students to make at least two complete passes in front of the eyes to check this clue.
	g. Check the left eye for the "distinct nystagmus at maximum deviation" clue. If the jerkiness is distinct, that is one clue.	Emphasize that the jerking must be definite and distinct in order to score this clue. NOTE: For questions regarding Fatigue Nystagmus see page VIII-22.
	o Check the right eye for the "distinct nystagmus at maximum deviation" clue and compare.	Point out that in most cases no white should be showing in the corner of the eye when observing this clue.
	h. Check the left eye for the "onset of nystagmus prior to 45 degrees" clue. If the jerking begins prior to 45 degrees, that is one clue.	Remind students to check each eye at least twice for this clue.
	o Check the right eye for "onset of nystagmus prior to 45 degrees" clue, and compare.	
	i. Total the clues o Maximum number of clues possible for each eye: 3 o Total maximum number of clues possible for both eyes: 6	Point out that, for many suspects, nystagmus clues will appear in the sequence listed. That is, as BAC increases, many people first show inability of smooth pursuit, then show distinct jerkiness at maximum deviation, and finally show an onset within 45 degrees. However, that may not be true in all cases: the clues may develop in virtually any sequence, in any particular suspect.

Aides	Lesson Plan	Instructor Notes
		Also, point out that the suspect's performance many not be exactly identical in both eyes. It is possible that all three clues definitely will be found in one eye, while only two (or sometimes only one) will show up in the other eye. It is always necessary to test <u>both</u> eyes, and to test them independently. Notwithstanding, it is unlikely that the eyes of someone under the influence of alcohol will behave <u>totally</u> different. Thus, if one eye shows all three clues distinctly while the other eye gives no evidence of nystagmus, the person may be suffering from one of the pathological disorders covered previously.
 **Display** Overhead VIII-12	6. Clues for Horizontal Gaze Nystagmus. a. When we administer the Horizontal Gaze Nystagmus test, we look for three specific clues as evidence of alcohol influence. b. We check each eye independently for each clue.	It is important that student always start with left eye first. Then check right eye for same clue. This procedure must be used for all three clues. Always start with subject's left eye.

Aides	Lesson Plan	Instructor Notes
	c. For standardization, begin with the subject's left eye. Check for the first clue. Next, check right eye for same clue. Repeat this procedure for each clue starting with left eye, then right eye. Compare and document the results.	
	d. When we are testing an eye, it is good practice to administer the test by-the-numbers each time, to make sure that no step is overlooked.	**<u>EMPHASIZE THAT: OFFICER SAFETY IS OF KEY IMPORTANCE WHEN ADMINISTERING THESE TESTS</u>.**
 **Display** Overhead VIII-13	e. Clue No. 1: Lack of Smooth Pursuit.	
	o The first clue requires that the suspect move the eye to follow the motion of a smoothly moving stimulus.	Emphasize that suspect must keep the head still and follow the stimulus with the eyes only.
	o The stimulus may be the eraser on a pencil, the tip of a penlight, the tip of your finger, or any similar small object.	Emphasize here that it is best to use a stimulus which has a contrasting tip or focal point.
	o Begin by holding the stimulus approximately 12-15 inches (30-38 cm) in front of the suspect's nose, and slightly higher than the level of the suspect's eye.	Point out that when stimulus slightly higher than eye level, suspect will have to open eyes wide to focus on it. Wide-open eyes make it easier to see the nystagmus.

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	o Move the stimulus smoothly all the way out to the right (checking suspect's left eye first) then move the stimulus smoothly all the way across the suspect's face to the left side (checking the suspect's right eye), then back to center. o Make at least two complete passes with the stimulus. o If a person is not impaired, the eyes should move smoothly as the object is moved back and forth. o If the person is impaired by alcohol and/or some other drugs, the eye should jerk noticeably as it moves back and forth. (1) The Mechanics of Clue Number 1. o It is necessary to move the object smoothly to obtain a true test of the eye's ability to pursue smoothly.	Analogy: movement of a non-impaired person's eye will be similar to the movement of a marble rolling across a polished pane of glass (i.e., frictionless). Analogy: movement of an impaired person's eyes will be similar to a marble rolling across a sheet of sandpaper (encountering resistance, friction). Note: This will also be seen with certain categories of drugs.

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	o The stimulus should be moved from center position, all the way out to the right side (checking subject's left eye) where the eye can go no further, and then all the way back across subject's face all the way out to the left side where the eye can go no further (checking subject's right eye) and then back to the center.	Demonstrate.
	o The object must be moved steadily, at a speed that takes **approximately** 2 seconds to bring the eye from center to side.	Point out that the stimulus should be moved at a speed that requires approximately two seconds to bring it from the center out all the way to the right side. It should be returned toward the subject's nose at the same speed.
	o A good practice is to hold the elbow stiff, but slightly bent, and to pivot the entire arm from the shoulder.	Demonstrate.
	o In testing for this clue, make at least two complete passes in front of the eyes.	Demonstrate.

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	o If you are still not able to determine whether or not the eye is jerking as it moves, additional passes may be made in front of the eyes.	
	(2) Live Demonstration of the Mechanics of Clue No. 1.	Solicit a student to participate in the live demonstration. Station the student-subject in a position where the eyes can easily be seen by the class. (It may be necessary to conduct the demonstration at two or more locations in the class to permit all to see.)
	o Position stimulus approximately 12-15 inches (30-38 cm) in front of nose, slightly higher than eye level.	Articulate each step in the procedural mechanics aloud.
	o Stimulus is moved smoothly from center all the way out to the right (checking subject's left eye), back across subject's face all the way to the left side (checking subject right eye) then back to center.	Point out how the arm is held to ensure smooth movement.
	o A second pass is conducted the same as the first.	Point out that each pass takes the eye as far to the side as it can go.

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	o On each pass, the arm is moved smoothly, and the eye is taken as far to the side as possible.	Point out that it takes approximately 2 seconds to move the object from center to the side as far as the eye can go. Solicit students' questions concerning the procedural mechanics for Clue No. 1.
	(3) Student practice of the mechanics of Clue No. 1.	
	o Practice in groups of two or three, taking turns.	Instruct each student to practice conducting the test of smooth pursuit, using another student as a subject. Remind students that they are to make at least two complete passes in front of the eyes.
	o Coaching and critiquing students' practice.	Common initial mistakes to note and correct: o Holding object too close to (or too far from) subject's eyes; o Moving object too slowly (or too quickly) toward the side; o Failing to move object far enough to the side to bring eye to maximum deviation. o Curving downward and curving around. Note: Encourage students to practice this procedure using a flat surface such as a wall for a guide.

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	o Student-led demonstration.	Choose a student who appears to be doing a good job in carrying out the procedural mechanics of Clue No. 1, and have that student come forward with a subject to demonstrate the mechanics to the class. Resume student practice and allow it to continue until all students appear reasonably proficient in carrying out the mechanics of Clue No. 1.
 **Display** Overhead VIII-14	f. Clue No. 2: Distinct Nystagmus at Maximum Deviation. o Once you have completed the test of smooth pursuit, you will test the eyes for distinct nystagmus when the eye is held at maximum deviation, beginning with the subject's left eye. (1) The Mechanics of Clue Number 2. o Once again, position the stimulus approximately 12-15 inches (30-38 cm) in front of subject's nose.	Demonstrate

Aides	Lesson Plan	Instructor Notes
	o Move the stimulus off to the right side (checking suspect's left eye) until the eye has gone as far as possible.	Demonstrate holding the stimulus steadily off to the side.
	o Hold the stimulus steady at that position for a minimum of four (4) seconds, and carefully watch the eye.	Point out that four (4) seconds is a relatively long period of time. You cannot simply hold the eye to the side for an instant, and expect to observe distinct jerking.
	o Then, move the stimulus back across the subject's face all the way out to the left side (subject's right eye).	Note: Fatigue Nystagmus. This type of nystagmus may begin if a subject's eye is held at maximum deviation for more than 30 seconds.
	o Hold the stimulus steady and carefully watch the eye.	
	o If the person is impaired, the eye is likely to exhibit definite, distinct and sustained jerking when held at maximum deviation for a minimum of 4 seconds.	Emphasize this point.
	o In order to "count" this clue as evidence of impairment, the nystagmus must be distinct and sustained for a minimum of 4 seconds.	ONCE AGAIN, EMPHASIZE OFFICER SAFETY.

Aides	Lesson Plan	Instructor Notes
	o If you think you see only slight nystagmus at this stage of the test, or if you have to convince yourself that nystagmus is present, then it isn't really there.	
	(2) Live Demonstration of the Mechanics of Clue No. 2.	
	o Stimulus initially positioned approximately 12-15 inches (30-38 cm) in front of the student-subject's nose, slightly higher than eye level.	
	o Stimulus moved to the side, drawing the eye to its maximum deviation.	
	o Hold the stimulus steady at that point for a minimum of 4 seconds, to determine whether or not there is distinct and sustained nystagmus.	Solicit a student to participate in the live demonstration.
	o Then, move the stimulus back across the subject's face all the way out to the left side (subject's right eye).	Station the student-subject in a position where eyes can readily be seen by the class. (It may be necessary to conduct the demonstration at two or more locations in the class.)

Aides	Lesson Plan	Instructor Notes
	o Hold the stimulus steady and carefully watch the eye. o Hold the stimulus steady at that point for a minimum of 4 seconds to determine whether or not there is distinct and sustained nystagmus.	Articulate each step in the procedural mechanics aloud.
	(3) Student practice of the mechanics of Clue No. 2. o Practice in groups of two or three, taking turns.	Instruct each student to practice conducting the test of maximum deviation, using another student as a subject.
	o Coaching and critiquing students' practice.	Common initial mistakes to note and correct: o not bringing the eye sufficiently far to the side (some white still showing). o not holding the object steadily for at least four seconds, at maximum deviation.
	o Student-led Demonstrations	Allow student practice to continue until all students appear reasonably proficient in carrying out the mechanics of Clue No. 2. Solicit students' questions concerning the procedural mechanics for Clue No. 2.

Aides	Lesson Plan	Instructor Notes
 **Display** Overhead VIII-15	g. Clue No. 3: Onset of Nystagmus Prior to 45 Degrees.	
	o Once again, position the stimulus approximately 12-15 inches (30-38 cm) in front of subject's nose.	**EMPHASIZE OFFICER SAFETY.**
	o The angle of onset of nystagmus is simply the point at which the eye is first seen jerking.	Examples: With someone at a very high BAC (0.20+), the jerking might begin almost immediately after the eye starts to move toward the side. For someone at 0.08 BAC, the jerking might not start until the eye has moved nearly to the 45 degree angle.
	o Generally speaking, the higher the BAC, the sooner the jerking will start as the eye moves toward the side.	
	o If the jerking begins prior to 45-degrees, that person's BAC could be 0.08 or above.	**REMIND STUDENTS THAT THE ADMINI-STRATION OF HGN IS NOT TO BE USED TO ESTIMATE SPECIFIC BAC LEVEL.**
	o It is not difficult to determine when the eye has reached the 45-degree point, but it does require some practice.	Instruct students that whatever distance you position the stimulus from the nose, you will reach 45 degrees when you have moved the stimulus an equal distance to the side. (i.e., If you start with the stimulus 12 inches from the nose, move it 12 inches to the side.)
	o If you start with the stimulus approximately 12-15 inches (30-38 cm) directly in front of the nose, you will reach 45-degrees when you have moved the stimulus an equal distance to the side.	

Aides	Lesson Plan	Instructor Notes
	o Two other important indicators can be used to determine if the eye is within 45 degrees:	Point out the white showing in the eye portrayed in Slide VIII-19. Note that <u>some</u> people's eyes may exhibit no white in the corner <u>prior</u> to 45-degrees.
	- at 45 degrees, some white usually will still be visible in the corner of the eye (for most people).	Point out alignment of stimulus and shoulder in Slide VIII-19.
	- If you started with the stimulus approximately 12-15 inches (30-38 cm) in front of the suspect, when you reach 45 degrees the stimulus will usually be lined up with, or slightly beyond, the edge of the subject's shoulder.	Point out that this latter indicator may not be valid if the suspect is either a very large or a very small person.
	(1) The Mechanics of Clue No. 3.	
	o The stimulus is positioned approximately 12-15 inches from (30-38 cm) subject's nose.	
	o It is necessary to move the stimulus slowly to identify the point at which the eye begins to jerk.	

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	o Start moving the stimulus towards the right side (left eye) at the speed that would take approximately 4 seconds for the stimulus to reach the edge of the suspect's shoulder.	Demonstrate stopping the stimulus, and holding it steady.
	o As you are slowly moving the stimulus, watch the eye carefully for any sign of jerking.	Demonstrate movement at that speed.
	o When you see the jerking begin, immediately stop moving the stimulus and hold it steady at that position.	
	o With the stimulus held steady, look at the eye and verify that the jerking is continuing.	Point out that nystagmus doesn't go away once the eye stops moving. If the officer actually has found the point of onset, the eye will continue to jerk when the stimulus is held steady.
	o If the jerking is <u>not</u> evident with the stimulus held steady, you have <u>not</u> located the point of onset. Therefore, resume moving the stimulus slowly toward the side until you notice the jerking again.	

Aides	Lesson Plan	Instructor Notes
	o When you locate the point of onset of nystagmus, you must determine whether it is prior to 45 degrees. - Verify that some white is still showing in the corner of the eye. - Examine the alignment between the stimulus and the edge of the suspect's shoulder.	
	o Start moving the stimulus towards the left side (right eye) at the speed that would take approximately 4 seconds for the stimulus to reach the edge of the suspect's shoulder.	Demonstrate stopping the stimulus, and holding it steady.
	o As you are slowly moving the stimulus, watch the eye carefully for any sign of jerking.	Demonstrate movement at that speed.
	o When you see the jerking begin, immediately stop moving the stimulus and hold it steady at that position.	

Aides	Lesson Plan	Instructor Notes
	o With the stimulus held steady, look at the eye and verify that the jerking is continuing.	Point out that nystagmus doesn't go away once the eye stops moving. If the officer actually has found the point of onset, the eye will continue to jerk when the stimulus is held steady.
	o If the jerking is <u>not</u> evident with the stimulus held steady, you have <u>not</u> located the point of onset. Therefore, resume moving the stimulus slowly toward the side until you notice the jerking again.	
	o When you locate the point of onset of nystagmus, you must determine whether it is prior to 45 degrees. - Verify that some white is still showing in the corner of the eye. - Examine the alignment between the stimulus and the edge of the suspect's shoulder.	

Aides	Lesson Plan	Instructor Notes
	(2) Live Demonstration of the Mechanics of Clue No. 3.	Solicit a student to participate in the live demonstration.
	o Stimulus initially positioned approximately 12-15 inches (30-38 cm) in front of student-subject's nose, slightly higher than eye level.	Station the student-subject in a position where student's eyes can readily be seen by the class. (It may be necessary to conduct the demonstration at two or more locations.)
	o Slowly move the stimulus toward the side, watching the eye for nystagmus.	Articulate each step in the procedural mechanics aloud.
	o Stop the stimulus and hold it steady when nystagmus is first observed.	
	o Verify that the jerking is continuing.	
	o Now determine whether the onset of nystagmus is prior to 45 degrees.	
	- is there white still showing in the corner of the eye?	
	- is the stimulus within or only slightly beyond the edge of the shoulder?	Solicit students' questions concerning the procedural mechanics for Clue No. 3.

Aides	Lesson Plan	Instructor Notes
	(3) Student practice of the mechanics of Clue No. 3.	
	o Practice in groups of two or three, taking turns.	Remind students to move stimulus slowly.
	o Coaching and critiquing students practice.	Instruct each student to practice conducting the test for onset of nystagmus prior to 45 degrees, using another student as the subject. Common mistakes to note and correct. o Incorrect position of stimulus. o Moving stimulus too fast.
	o Student-led demonstration.	
 **Display** Overhead VIII-16	7. Training Aid: The 45 Degree Template	
	a. A training aid has been provided to help you practice estimating a 45 degree angle.	Instruct students to remove their copies of the template from their student manuals. NOTE: See Attachment A following Slide VIII-35 - The 45 Degree Template.
	b. The outline of a square, with its diagonal line, gives us a 45 degree angle.	
	c. This outline, or template, is provided for practice only.	Demonstrate proper placement of the template. <u>It is not to be used with actual DWI suspects.</u>

Aides	Lesson Plan	Instructor Notes
	d. To use the template, have your training partner hold the corner of the square under the nose.	Demonstrate placement of the pencil or penlight.
	e. When you line up your stimulus with the diagonal, your partner will be looking along a 45 degree angle.	
	8. Student practice with 45 degree Template.	
	a. Practice in groups of two or three, taking turns.	Instruct students to begin by lining the stimulus up with the diagonal, so they can become familiar with the position of an eye at a 45 degree angle. Point out the amount of white showing in the corner of an eye at 45 degrees. Next, instruct each student to attempt to locate the 45 degree point <u>without</u> using the template, then to raise the template to check the accuracy of the estimate.
	b. Coaching and critiquing students' practice.	Common initial mistakes to note and correct: o Failing to check for white in the corner of the eye. o Failing to check alignment of object with shoulder. o Tending to stop short of 45 degrees.

Aides	Lesson Plan	Instructor Notes
	c. Student-led demonstration.	Choose a student who appears to be doing a good job in estimating a 45 degree angle, and have the student come forward to demonstrate to the class. Resume student practice, and allow it to continue until all students appear reasonably proficient in carrying out the mechanics of Clue No. 3.
 **Display** Overhead VIII-17	9. Test Interpretation. a. Based upon the original developmental research into Horizontal Gaze Nystagmus, the criterion for this test is 4. b. If a person exhibits at least 4 out of the possible 6 clues, the implication is a BAC above 0.10. c. Using this criterion, the test is 77% accurate.	Note: Remind students that the SFST field evaluation study conducted in San Diego in 1998 indicated that "HGN alone can provide valid indications to support arrest decisions at 0.08 BAC."
	10. Test Demonstration.	Choose a student to serve as a demonstration subject. Conduct a complete test of that student-subject, articulating every step in the testing sequence (slide VIII-15 should be redisplayed during this demonstration). Upon completion of the demonstration, solicit students' questions concerning Horizontal Gaze Nystagmus.

Aides	Lesson Plan	Instructor Notes
		If time permits, conduct another complete demonstration of HGN, using another student.
 **5 Minutes**  **Display** Overhead VIII-18	**D. Vertical Gaze Nystagmus**	
	1. The <u>Vertical Gaze Nystagmus</u> test is easy to administer.	
	o Position the stimulus <u>horizontally</u>, approximately 12-15 inches (30-38 cm) in front of the subject's nose.	Point out that vertical nystagmus was not examined in the original research that led to the validation of the Standardized Field Sobriety Test battery (Horizontal Gaze Nystagmus, Walk-and-Turn and One-Leg Stand).
	o Instruct the subject to hold the head still, and follow the stimulus with the eyes only.	
	o Raise the stimulus until the subject's eyes are elevated as far as possible. Hold for approximately 4 seconds.	<u>Select</u> a student or another instructor to serve as a subject and demonstrate the vertical nystagmus test.
	o Watch the eyes closely for jerking as they are moved up and are held in the upmost position.	
	2. Vertical Gaze Nystagmus may be present in subjects under the influence of high doses of alcohol for that individual, and some other drugs.	

Aides	Lesson Plan	Instructor Notes
45 Minutes  **Display** Overhead VIII-19	**E. Walk-and-Turn** 1. Review of Divided Attention Definition. a. Walk-and-Turn is a field sobriety test based on the important concept of divided attention. b. The test requires the suspect to divide attention among mental tasks and physical tasks. c. The mental tasks include comprehension of verbal instructions; processing of information; and, recall of memory. d. The physical tasks include balance and coordination; the suspect is required to maintain balance and coordination while standing still, walking, and turning. 2. Test Stages a. The Walk-and-Turn test has two stages, the <u>instructions</u> stage and the <u>walking</u> stage.	Selectively display overhead. Pose this question: "What do we mean by 'divided attention'?" Lead the discussion, as these items were previously identified in Session VII. Remind students that prior to administering this test, ask the subject if they have any physical problems or disabilities.

Aides	Lesson Plan	Instructor Notes
	b. Both stages are essential parts of the test. c. Important evidence of impairment often comes to light during both stages.	
	3. Test Requirements a. The test requires the suspect to take nine heel-to-toe steps in a straight line; to turn around in a prescribed manner; and, to return nine heel-to-toe steps along the line. b. This test should be conducted on a reasonably dry, hard, level, non-slippery surface.	NOTE: Standardizing this test for every type of road condition is unrealistic. The original research study recommended that this test be performed on a dry, hard, level, nonslippery surface and relatively safe conditions. If not, the research recommends: 1) suspect be asked to perform the test elsewhere; or 2) only HGN be administered. However, recent field validation studies have indicated that varying environ-mental conditions have not affected a suspect's ability to perform this test.
	c. The line should be long enough to permit the suspect to take nine heel-to-toe steps along it. d. If a line is not available, the officer may create a line.	NOTE: Suspects with heels 2" or higher should be given the opportunity to remove their footwear. NOTE: If no line exists, it acceptable to have a suspect walk an imaginary line.
	4. Demonstration of the Instructions Stage.	When demonstrating the instructions stage, it is very important that the students be able to see the instructor's feet. It may be necessary to demonstrate at several locations in the classroom.

Aides	Lesson Plan	Instructor Notes
		<u>Remind students of officer safety precautions</u>. **o weapon side away from suspect** **o never turn back on suspect** **o aware of surroundings (environment)**
	a. FOR STANDARDIZATION PURPOSES, instruct suspects to place left foot on the line first.	Demonstrate placement of both feet.
	b. Then instruct suspects to place their right foot on the line, ahead of the left foot, with heel of right against the toe of left.	
	c. Tell suspect to place arms down at sides.	Demonstrate placement of arms at sides.
	d. Stress that suspect is to maintain that position until you have completed the instructions.	
	e. Inform suspect <u>not</u> to begin walking until told to do so.	
	f. At this point, ask suspect: "Do you understand?"	Emphasize that officer must receive some affirmative response before continuing.
	g. Although this position is not a stance that people normally will take of their own choosing, it is not difficult for an unimpaired person to maintain this stance, even for several minutes.	

Aides	Lesson Plan	Instructor Notes
	h. People who are impaired can maintain this stance if they concentrate their full attention on it.	NOTE: An impaired person cannot concentrate their full attention on maintaining the stance. They also have to listen to and comprehend your instructions.
	i. When you are with a suspect who appears to be impaired, you may see the following behaviors during the instructions stage.	
	o Fail to maintain heel-to-toe stance.	Demonstrate.
	o Starts walking before commanded.	Demonstrate.
	j. Impaired suspects may concentrate so much on maintaining balance there is little or no comprehension of the subsequent instructions.	Instructor may break away from the heel-to-toe stance at this point.
	5. Demonstration of the Walking Stage.	A straight line must be available for this and subsequent demonstrations. A 10-12 foot strip of masking tape on the floor of the class-room will prove suitable.
	a. Walking stage requires nine heel-to-toe steps along the line, a turn, and nine steps back along the line.	
	b. While walking, keep the arms at the sides, count the steps out loud, and keep watching the feet.	

Aides	Lesson Plan	Instructor Notes
	c. Execute Walk-and-Turn.	Instructor's demonstration. (repeat if necessary)
 **Display** Overhead VIII-20	6. Walk-and-Turn Administrative Procedures	Selectively reveal major sections of overhead.
	a. Initial verbal instructions o Tell suspect to assume the heel-to-toe stance (left foot on line, then right foot on line, ahead of left). o Tell suspect to place arms down at sides. o Tell suspect not to start walking until told to do so. o Make sure suspect understands instructions.	NOTE: FOR STANDARDIZATION PURPOSES, suspect is told to place left foot on line first, then right foot on line, ahead of left in a heel-to-toe position.
	b. Description of basic test requirements. o Tell suspect to take nine heel-to-toe steps on the line, to turn around, keeping one foot on the line, and to return nine heel-to-toe steps. o Demonstrate what you mean by walking heel-to-toe. (3 steps suffice for the demonstration)	**Stress that officers should never turn their backs on suspects while demonstrating. Instead, they should walk at right angle to the line, keeping the weapon away from the suspect.**
	c. Description of turn procedures.	

Aides	Lesson Plan	Instructor Notes
	o Tell suspect that, on the ninth step, keep the <u>front</u> foot on the line, and turn by taking several small steps with the other foot.	NOTE: This turn procedure is provided in order to standardize the turn described in the study and for suspects' safety.
	o Demonstrate the turn for the suspect.	**Stress that, when demonstrating the turn, officers should stand at right angle to the line with the suspect to their left. Then, they can turn on the left leg without ever turning their backs to the suspect.** NOTE: Difference for left-handed officers.
	d. Final verbal instructions. o Tell suspect that, while walking, to watch feet at all times. o Tell suspect to keep arms at sides at all times. o Tell suspect to count steps out loud. o Tell suspect that, once the walking begins, not to stop until the test is completed.	NOTE: The final verbal instructions are provided to further standardize administration of the test described in the study.

Aides	Lesson Plan	Instructor Notes
	o Ask if suspect understands the instructions. Point out that, if suspect doesn't understand some part of the instructions, officer should repeat only that part which suspect doesn't understand.	Solicit students' questions concerning the Walk-and-Turn administrative procedures. Select a student to participate as a subject in the demonstration.
	7. Demonstration of Walk-and-Turn Administrative Procedures.	Use precise language to direct the student-subject to assume the instructions stance.
	a. Tell the student-subject to assume the instructions stance.	Make sure directions are understood.
	b. Tell the student-subject not to start walking until told to do so.	
	c. Tell the student-subject of the requirement to take nine heel-to-toe steps, to turn, and to take another nine heel-to-toe steps.	Demonstrate several heel-to-toe steps.
	d. Tell the student-subject of the required turn procedures. Demonstrate the proper turn.	Demonstrate the turn.
	e. Give the student-subject the final verbal instructions: o Keep watching feet o Count steps out loud o Arms at sides o Don't stop walking until test is completed.	

Aides	Lesson Plan	Instructor Notes
	f. Ask student-subject if instructions are understood.	Clarify any parts that are not understandable. At this point, do not instruct the student-subject to execute the test. Rather, thank the student-subject for participating and allow the student to return to the seat. Solicit students' questions concerning the test administrative procedures.
 **Display** Overhead VIII-21	8. Clues for Walk-and-Turn Test a. When administering the Walk-and-Turn test, we look for certain specific behaviors, at certain times in the test. b. Each behavior, or action, is considered as one clue. c. There is a maximum of eight clues on this test. d. The first two clues are checked during the instructions stage. o Can't balance during instructions.	Selectively reveal major sections of overhead. Reveal the first major section of slide VIII-21. Emphasize that this clue is recorded only if the feet actually break apart. Note: During the instructions stage, do not record the clue simply because suspect raises arms or wobbles slightly.

Aides	Lesson Plan	Instructor Notes
		Demonstrate actions that constitute "can't balance during instructions", and demonstrate other actions that do not justify recording this clue.
	o Starts too soon.	Emphasize that this clue can't be recorded unless suspect was told not to start walking until directed to do so. Stress to the students that these first two clues, like all clues in this test, can be accumulated only once. Example: if the suspect loses balance <u>twice</u> during the instructions stage, it still only constitutes one clue. <u>However</u>: on the standard note taking guide, record <u>how many times</u> each clue was observed.
	e. The <u>next four clues</u> are checked while the suspect is walking, either up or down the line.	Reveal the next major section of slide VIII-21.
	o Stops while walking (pauses to regain balance).	Emphasize that it is because of this clue that it is important to inform the suspect <u>not</u> to stop walking once the test begins.
	o Misses heel-to-toe. o Steps off the line.	Point out that a gap of at least one-half inch is necessary to record this clue.

Aides	Lesson Plan	Instructor Notes
	o Uses arms to balance.	Point out that a movement of the arms of six or more inches from the side is required to record this clue. Demonstrate each of these clues. Point out that it is often possible to note two of these clues simultaneously. Examples: (Demonstrate) o pauses while walking and simultaneously raises arms. o misses heel-to-toe and simultaneously stops walking. Reveal the next item on slide VIII-21.
	f. The next clue is an improper turn. This clue should be recorded if the suspect: o Loses balance on turn (staggers, stumbles, etc.); or, o Turns other than the way officer demonstrated.	Reveal the next item on slide VIII-21. Demonstrate various ways of "turning incorrectly" (i.e., pivots, spins).
	g. The next clue is checked on the basis of the number of steps that the suspect actually takes.	Reveal the next item on slide VIII-21.

Aides	Lesson Plan	Instructor Notes
	o If the suspect takes other than nine steps, in either direction, it is considered only one clue.	Emphasize that it is the number of steps that the suspect physically takes that matters here. Mistakes in the verbal count do not justify recording this clue.
	h. The test may be terminated if the suspect cannot safely complete it. For example:	Reveal the last item on slide VIII-21.
	o Suspect steps off the line three or more times.	NOTE: If suspect can't do test, record as if all eight clues were observed.
	o Suspect nearly falls.	
	o Suspect gets into a "leg-lock" position (legs crossed, unable to move)	Demonstrate "leg-lock". Emphasize that the test should be stopped if unsafe for the suspect.
		Solicit students' questions concerning the Walk-and-Turn clues.
 **Display** Overhead VIII-22	9. Walk-and-Turn Test Interpretation a. Based on the original developmental research into the Walk-and-Turn test, the criterion for this test is 2. b. If a person exhibits at least 2 out of the possible 8 clues, the implication is that the suspect has a BAC above 0.10.	

Aides	Lesson Plan	Instructor Notes
	c. Using that criterion, this test is 68% accurate.	
	d. Restrictions.	**NOTE: The original research indicated that individuals over 65 years of age had difficulty performing this test.**
	10. Test Demonstrations	Choose a student to serve as a demonstration subject. Conduct a complete test of the student-subject, carefully carrying out all of the administrative procedures. (Slide VIII-20 should be redisplayed during the demonstration.) Have the student-subject actually perform the walking stage of the test. Discuss the student-subject's performance in terms of the test scoring factors. (Slide VIII-25 should be redisplayed during this discussion.) If time permits, conduct another demonstration using another student-subject.
5 Minutes	**F. Combining the Clues of The Horizontal Gaze Nystagmus and Walk-and-Turn.**	

Aides	Lesson Plan	Instructor Notes
	1. Based on the original research you will be 80% accurate in classifying suspects that are above 0.10.	NOTE: A combination of four or more clues of HGN and two or more clues of the Walk-and-Turn, suspects can be correctly classified as above 0.10 BAC 80% of the time.
 **35 Minutes**	**G. One-Leg Stand**	
 **Display** Overhead VIII-23	1. Review of Divided Attention definition	Selectively display slide.
	a. One-Leg Stand is another field sobriety test that employs divided attention.	
	b. The suspect's attention is divided among such simple tasks as balancing, listening, and counting out loud.	
	c. Although none of these is particularly difficult in itself, the combination can be very difficult for someone who is impaired.	Remind students that prior to administering this test, check if the subject has any physical problems or disabilities.
	2. Test Stages.	Selectively display remainder of slide.
	a. Like all divided attention tests, One-Leg Stand has two stages.	
	b. They are the <u>instructions</u> stage and the <u>balance and counting</u> stage.	
	c. Both stages are important, because they can affect the suspect's overall performance on the test.	

Aides	Lesson Plan	Instructor Notes
	3. Test Requirements. a. The test requires the suspect to stand on one leg, with the other leg held out straight, approximately six inches (15 cm) off the ground, for 30 seconds. b. This test should be conducted on a reasonably hard, dry, level, and non-slippery surface.	Demonstrate the One-Leg Stand. NOTE: Standardizing this test for every type of road condition is unrealistic. The original research study recommended that this test be performed on a dry, hard, level, nonslippery surface and relatively safe conditions. If not, the research recommends: 1) suspect be asked to perform the test elsewhere; or 2) only HGN be administered. However, recent field validation studies have indicated that varying environmental conditions have not affected a suspect's ability to perform this test.
	4. Demonstration of the Instructions Stage. a. The Instructions stage of this test is quite simple. o suspect stands with feet together. o suspect keeps arms at the sides. b. Suspect is instructed to maintain that position until told otherwise. 5. Demonstration of balance and count stage.	**Remind students of officer safety precautions.**

Aides	Lesson Plan	Instructor Notes
	a. The verbal instructions for this test also are quite simple. o Suspect is told to raise one leg (either leg that the suspect chooses), approximately six inches (15 cm) off the ground, keeping foot pointed out. o Suspect is told to keep both legs straight. o Suspect is told to look at the elevated foot. o Suspect is told to hold that position while counting out loud in the following manner: "one thousand and one, one thousand and two, one thousand and three, and so on, until told to stop."	Point out that the officer must demonstrate the stance. **POINT OUT THE NEED TO TIME THE 30-SECOND COUNT.** Stop test at end of 30 seconds. Point out that the 30 seconds constitute an important feature of the test. Many impaired persons can maintain balance for 20-25 seconds, but seldom for up to 30. The suspect may be told at any time to stop counting for their safety or inability to properly perform the test.
 **Display** Overhead VIII-24	6. One-Leg Stand Administrative Procedures. a. Instructions stage. o Stand with feet together. o Keep arms at side.	Selectively display slide.

Aides	Lesson Plan	Instructor Notes
 **Display** Overhead VIII-24A	o Maintain position until told otherwise. b. Balance and counting stage. o Raise one leg, either leg. o Keep raised leg approximately 6 inches (15 cm) off the ground, foot pointed out. o Keep both legs straight. o Keep eyes on elevated foot. o Count out loud from one-thousand-and-one, one-thousand-and-two, one-thousand-and-three, and so on until told to stop. 7. Demonstration of the One-Leg Stand Administrative Procedures. a. Instructions stage: tell subject to: o stand with feet together o keep arms at side o maintain that position until told otherwise (ask if understands)	Selectively display slide VIII-24A. NOTE: Officer should always time the 30 seconds. If the suspect puts their foot down too soon, tell suspect to keep foot elevated and continue counting. If suspect counts too slow, stop the test at 30 seconds.

Aides	Lesson Plan	Instructor Notes
	b. Balance and counting stage o Raise one leg (either leg), approximately 6 inches (15 cm) off the ground, foot pointed out. o Keep both legs straight. o Keep eyes on elevated foot. o While holding that position, count out loud in the following manner: one-thousand-one, one to one-thousand-two, one-thousand-three until told to stop.	Always ask subject if they understand directions before beginning test.
 **Display** Overhead VIII-25	8. Clues for the One-Leg Stand. a. When administering the one-leg stand test, we look for certain specific behaviors. b. Each behavior or action is considered one clue. c. There is a maximum number of 4 clues on this test. d. The first clue is <u>swaying</u>.	Selectively reveal contents of slide. Reveal the first item on slide. Emphasize that swaying means a distinct, noticeable side-to-side or front-to-back movement of the elevated foot or of the suspect's body.

Aides	Lesson Plan	Instructor Notes
		Slight tremors of the foot or body should not be interpreted as swaying. Demonstrate swaying.
	e. The next clue is <u>using the arms</u> to balance.	Reveal the next item on slide. Point out that a movement of the arms of six inches or more from the side is sufficient to record this clue. Demonstrate using the arms to balance.
	f. The next clue is <u>hopping</u>.	Reveal the next item on slide. Demonstrate hopping.
	g. The next clue is <u>putting the foot down</u>, before 30 seconds elapse. o If suspect's foot touches ground, have suspect raise it and continue counting until told to stop.	Reveal the next item on slide. Demonstrate putting the foot down. Emphasize some suspects count slowly and may stand on the leg for more than 30 seconds. If suspect is counting slowly, terminate the test after 30 seconds have passed. Point out that it is possible to note two clues simultaneously. <u>Examples</u> (Demonstrate): o hopping <u>and</u> swaying o foot down <u>and</u> arms raised.

Aides	Lesson Plan	Instructor Notes
	h. The test may be terminated if the suspect cannot safely complete it. For example:	Reveal the last item on slide.
	o Suspect puts foot down three or more times.	NOTE: Record as if all four clues were observed.
	o Suspect nearly falls.	
 **Display** Overhead VIII-26	9. Test Interpretation.	
	a. Based on the original developmental research for the One-Leg Stand test, the criterion for this test is 2.	
	b. If the person exhibits at least 2 out of the possible 4 clues, the implication is that the suspect's BAC is above 0.10.	
	c. Using that criterion, this test is 65% accurate.	
	d. Restrictions.	**NOTE: The original research indicated that individuals over 65 years of age or 50 pounds or more overweight had difficulty performing this test.**
	10. Test Demonstrations.	Choose a student to serve as a demonstration subject.
		Conduct a complete test of the student-subject, carefully articulating the verbal instructions.

Aides	Lesson Plan	Instructor Notes
		Discuss the student-subject's performance in terms of the test scoring factors. (Slide VIII-30 should be redisplayed during this discussion.) If time permits, conduct another demonstration using another student-subject.
5 Minutes	**H. Limitations of the Three Tests.** 1. Nystagmus limitations. a. A small percentage of people may exhibit nystagmus, due to certain pathological disorders. b. Some suspects may exhibit Horizontal Gaze Nystagmus due to the use of alcohol and certain other drugs. c. A small percentage of individuals may exhibit natural nystagmus. 2. Divided Attention test limitations. a. Both the Walk-and-Turn test and the One-Leg Stand test require a reasonably smooth, level surface. b. Persons with injuries to their legs, or inner ear disorders, may have difficulty with these tests or with other balance tests.	

Aides	Lesson Plan	Instructor Notes
 **20 Minutes**	**I. Taking Field Notes on the Standardized Field Sobriety Tests** 1. For purposes of the arrest report and courtroom testimony, it is not enough to report the number of clues on the three tests. a. The numbers are important to the police officer in the field, because they help determine whether there is probable cause to arrest. b. But to secure a conviction, more descriptive evidence is needed. c. The officer must be able to describe <u>how</u> the suspect performed on the tests, and <u>what</u> the suspect did.	
	2. The standard note-taking guide is designed to help develop a clear description of the suspect's performance on the tests.	Instruct the students to take out a copy of the note-taking guide to follow along with this discussion.
 **Display** Overhead VIII-27	3. The section on the pre-arrest screening appears at the bottom of the guide's front side. a. Complete the entire procedure for both eyes, checking "yes" or "no" for each clue.	This slide will be left on display throughout the discussion.

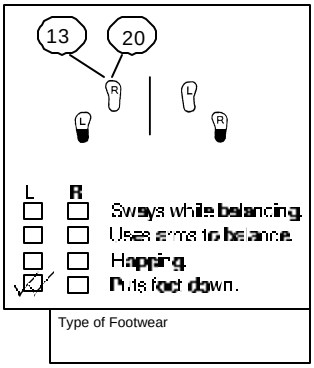
Aides	Lesson Plan	Instructor Notes
	o Check "yes" if the clue is present	NOTE: For standardization, test the suspect's <u>left</u> eye first. Then, check for the same clue in the <u>right</u> eye.
	o Check "no" if the clue is not present	Emphasize that officers must be careful to place their check marks in the columns corresponding to the eye actually being checked.
	b. After <u>both</u> eyes have been completely checked, total the number of HGN clues observed.	Point to this item on slide VIII-27. Remind students that the "number" of clues is used only for administrative purposes and that for courtroom testimony a complete description of each clue is essential.
	c. In the section labeled "other", record any facts, circumstances, conditions or observations that may be relevant to this procedure. o Examples of additional evidence of impairment emerging while checking for nystagmus: - suspect unable to keep head still; - suspect swaying noticeably; - suspect utters incriminating statements.	Point to this item on slide VIII-27. Give examples of facts, circumstances, etc., that should be noted in this section of the note-taking guide (i.e., Resting Nystagmus).  Ask students to give additional examples of facts, circumstances, etc., that should be noted.

Aides	Lesson Plan	Instructor Notes
	o Examples of conditions that may interfere with suspect's performance while checking for nystagmus:	
	- wind, dust, etc. (irritating suspect's eyes);	NOTE: Always face suspect away from flashing or strobe lights.
 **Display** Overhead VIII-28	4. The section on the Walk-and-Turn test appears at the top of the guide's back side.	This slide will be left on display throughout the discussion of Walk-and-Turn scoring.
	a. First two clues are checked only during the instructions stage.	Point to the first two clues on slide VIII-28.
	o In the boxes provided write <u>number of times</u> the clue appears during the instructions stage.	NOTE: Checks (**T**) may be used to denote number of clues. However, always write totals (numerically) in box.
	o <u>Example</u>: if suspect loses balance twice during the instructions stage, write "2" in that box.	Remind students that the clue "loses balance during instructions" is recorded only if the suspect's feet "break apart".
	o <u>Example</u>: if the suspect does not start too soon, write "0" in that box.	Emphasize that students are <u>never</u> to leave a box blank: if the clue doesn't appear, they must indicate that by writing "0".
	b. Record the next four clues <u>separately</u> for each nine steps.	Point to these items on slide VIII-28.

Aides	Lesson Plan	Instructor Notes
	c. If suspect <u>stops walking</u>, record it by drawing a vertical line across the toe at the step at which the stop occurred. Do this for each nine steps.	Instruct students to place a letter "S" at bottom of vertical line to indicate "stops walking".
	o How many times during first nine steps; o How many times during second nine steps.	Remind students that, if suspect stops walking even once, that will count as one clue; but in order to prepare a clear, descriptive arrest report, it is best to document how many times suspect paused while walking.
	d. If suspect <u>fails to touch heel-to-toe</u>, record how many times this happens.	Instruct students to place the letter "M" at the bottom of vertical line to indicate "misses heel to toe".
	e. If suspect <u>steps off the line</u> while walking, record it by drawing a line from the appropriate footprint at the angle in the direction in which the foot stepped. Do this for each nine steps.	
	f. If suspect <u>uses arms to balance</u>, give some indication of how often or how long this happens.	
	o <u>Example</u>: suspect raised arms from sides three times;	Place three **T** (check marks) in the box.
	o <u>Example</u>: suspect held arms away from sides during steps 3 through 7;	Write "steps 3-7" in box.

Aides	Lesson Plan	Instructor Notes
	o Example: suspect "flapped" arms continuously.	Write in box.
	g. Record the actual number of steps taken by suspect, in each direction.	Point out that Slide VIII-28 states "actual steps taken". Wrong number of steps is the validated clue.
	h. For the next clue, "the turn," record a description of the turn. o Example: turned incorrectly; o Example: stumbled, to left; o Example: wrong direction; o Example: no small steps.	
	i. If you terminate the test because the suspect "cannot perform test", indicate why. o Example: off line 3 times;	Point to this item on slide VIII-28.
	o Example: staggered six steps to right, nearly fell; o Example: "leg-locked" after fifth step.	NOTE: Stop test for fear of injury to suspect.

Aides	Lesson Plan	Instructor Notes
	j. At end of the test, examine each factor and determine the total number of clues recorded.	**Remind students that, even if a clue shows up more than once, each clue is counted <u>only</u> once.**
	k. In the section labeled "other", record any facts, circumstances, conditions or observations that may be relevant to this test.	Point to this item on slide VIII-28.
	o Examples of additional evidence of impairment emerging during Walk-and-Turn test: - suspect verbally miscounts steps; - suspect utters incriminating statements.	Give examples of facts, circumstances, etc., that should be noted in this section of the note-taking guide.
	o Examples of conditions that may interfere with suspect's performance of the Walk-and-Turn test: - wind/weather conditions; - suspect's age; - suspect's footwear.	? Ask students to give additional examples of facts, circumstances, etc., that should be noted. NOTE: Suspects with heels 2" or higher should be given the opportunity to remove their footwear.

Aides	Lesson Plan	Instructor Notes
Display Overhead VIII-29	5. The section on the One-Leg Stand test appears midway down the page. a. Record the suspect's performance <u>separately</u>. b. For each clue, record <u>how often</u> it appears. c. If suspect <u>sways</u>, indicate how often with a check mark. d. Indicate above the feet the number they were counting when they put their foot down. e. Check marks should be made to indicate the number of times the suspect swayed, used arms, hopped or put foot down. o Place check marks in or near the small boxes to indicate how many times you observed each of the clues. In addition, if the suspect puts the foot down during the test, record when it happened. To do this, write the count number at which the foot came down.	This slide will be left on display throughout the discussion of one-leg stand clue. Point out that, by recording <u>when</u> things happen as well as <u>what</u> happens, a more descriptive arrest report can be prepared.  Demonstrate the proper documentation for observed clues.

Aides	Lesson Plan	Instructor Notes
	For example, suppose that, when standing on the left leg, the suspect lowered the right foot at a count of "one thousand and thirteen," and again at "one thousand and twenty;" Your diagram should look like the sketch to the right.	
	d. If suspect uses arms to balance, indicate how often arms were raised.	
	e. If suspect hops, indicate how many hops were taken.	
	f. If suspect puts foot down, indicate how many times the foot came down.	
	g. If you terminate the test for "cannot perform test", indicate explicitly why you did so.	
	o Example: foot down 3 times;	
	o Example: staggered three steps to right, then fell;	Point to this item on slide VIII-29.
	o Example: continuous hopping, flailing arms, nearly falling.	

Aides	Lesson Plan	Instructor Notes
	h. At end of the test, examine each clue and determine how many clues have been recorded.	Remind students that, even if a clue shows up more than once, each clue is counted only once.
	i. Write the number in the "total clues" box.	Point to this item on slide VIII-29. **Remind students that "number" of clues is utilized only for administrative purposes and that for courtroom testimony a complete description of each clue observed is essential.**
	j. In the section labeled "other", record any facts, circumstances, conditions or observations that may be relevant to this test.	Point to this item on slide VIII-29.
	o Examples of additional evidence of impairment emerging during one-leg stand test:	 Ask students to give additional examples of facts, circumstances, etc., that should be noted.
	- suspect verbally miscounts 30 seconds; - suspect utters incriminating statements.	Give examples of facts, circumstances, etc., that should be noted in this section of the note-taking guide (i.e., untied shoelaces, removed footwear, etc.).
	o Examples of conditions that may interfere with suspect's performance of one-leg stand:	NOTE: Suspects with heels 2" or higher should be given the opportunity to remove their footwear.
	- wind/weather conditions;	Solicit students' questions concerning field note taking.

Aides	Lesson Plan	Instructor Notes
	- suspect's age; - suspect's footwear.	